

ABSTRACT OF THE DISCLOSURE

It is an object to provide a laser apparatus, a laser irradiating method and a manufacturing method of a semiconductor device that make laser energy more stable. To
5 attain the object, a part of laser beam emitted from an oscillator is sampled to generate an electric signal that contains as data energy fluctuation of a laser beam. The electric signal is subjected to signal processing to calculate the frequency, amplitude, and phase of the energy fluctuation of the laser beam. The transmittance of a light amount adjusting means is controlled in order that the transmittance changes in antiphase to the phase of the
10 energy fluctuation of the laser beam and with an amplitude capable of reducing the amplitude of laser beam emitted from the oscillator, the control being made based on the phase difference between the phase of a signal that is in synchronization with oscillation of laser beam emitted from the oscillator and the phase calculated, on the energy ratio of the sampled laser beam to laser beam emitted from the oscillator, and on the frequency and
15 amplitude calculated. In the light amount adjusting means, energy of the laser beam oscillated from the oscillator energy is adjusted.